WHAT IS CLAIMED IS:

1. A method of forming laser-induced grating pattern, comprising the steps of:

providing a substrate with a polished surface having a plurality of reflective regions thereon;

providing a pulsed laser beam that shines on the reflective regions on the substrate to produce a grating pattern through optical interference; and

providing a cylindrical lens for adjusting the configuration of the grating pattern.

2. The method of claim 1, wherein the reflective regions on the substrate are formed by performing a series of imprinting operations using a Vicker's micro-hardness tester.

3. The method of claim 1, wherein the reflective regions on the substrate are formed by performing a series of semiconductor processes to shape the surface of the substrate.

4. The method of claim 1, wherein each reflective region has at least a reflective surface such that all the reflective surfaces are parallel to each other.

5. The method of claim 1, wherein each reflective region is a multi-facial conical depression.

6. The method of claim 1, wherein the substrate furthermore comprises a protective layer on the polished surface and the reflective region.

7. The method of claim 6, wherein the protective layer is fabricated using a dielectric material.

8. The method of claim 1, wherein the cylindrical lens has a light incident surface and a light-emitting surface such that the light incident surface is a plane surface and the

light-emitting surface is a convex surface and that the grating pattern enters the light incident surface and emerges from the light-emitting surface of the cylindrical lens.

9. The method of claim 8, wherein the light incident surface comprises a plane rectangular surface.

10. The method of claim 1, wherein the grating pattern produces a surface acoustic wave transmission on a surface film of the substrate.

11. The method of claim 1, wherein the grating pattern on the surface of the substrate has a rectangular overall profile.

12. A method of measuring the thickness of a thin film, comprising the steps of:

providing a substrate with a polished surface having a plurality of reflective regions thereon;

providing a pulsed laser beam that shines on the reflective regions on the substrate to produce a grating pattern through optical interference;

providing a cylindrical lens positioned between the substrate and the thin film such that the configuration of the grating pattern can be adjusted through a shift in lens position; and

finding the thickness of the film indirectly through taking measurement of the surface acoustic wave produced by the laser-induced grating pattern on the film.

13. The method of claim 12, wherein the reflective regions on the substrate are formed by performing a series of imprinting operations using a Vicker's micro-hardness tester.

14. The method of claim 12, wherein the reflective regions on the substrate are formed by performing a series of semiconductor processes to shape the surface of the substrate.

15. The method of claim 12, wherein each reflective region has at least a reflective surface such that all the reflective surfaces are parallel to each other.

16. The method of claim 12, wherein each reflective region is a multi-facial conical depression.

17. The method of claim 12, wherein the substrate furthermore comprises a protective layer on the polished surface and the reflective region.

18. The method of claim 17, wherein the protective layer is fabricated using a dielectric material.

19. The method of claim 12, wherein the cylindrical lens has a light incident surface and a light-emitting surface such that the light incident surface is a plane surface and the light-emitting surface is a convex surface and that the grating pattern enters the light incident surface and emerges from the light-emitting surface of the cylindrical lens.

20. The method of claim 19, wherein the light incident surface comprises a plane rectangular surface.

21. The method of claim 12, wherein the acoustic wave propagates in a plane parallel to the surface of the film.

22. The method of claim 12, wherein the grating pattern on the surface of the substrate has a rectangular overall profile.